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| 10/542,862 | 01/11/2006 | Andrew John Cook | 1021500-000138 | 8659 |
| 21839 | 7590 | 09/02/2010 | | |
| BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404 | | | | EXAMINER |
| | | | | LANGMAN, JONATHAN C |
| ART UNIT | | PAPER NUMBER | | |
| | | 1784 | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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offserv@bipc.com

| | | |
|------------------------------|--|------------------------------------|
| Office Action Summary | Application No. 10/542,862 | Applicant(s) COOK ET AL. |
| | Examiner JONATHAN C. LANGMAN | Art Unit 1784 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 17 August 2010.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,4-11,20 and 22 is/are pending in the application.

4a) Of the above claim(s) 11 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1,4-10,20 and 22 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/88/08)
Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____

5) Notice of Informal Patent Application

6) Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 17, 2010 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 6 is to a toughened glass and depends from claim 1 which teaches a glazing panel which may or may not comprise multiple layers of glass. The specification teaches that the conductive components can be formed on toughened glass or,

alternatively, on a ply of a laminate of glass panes (page 7 second and third paragraphs).

Whenever toughened glass is mentioned within the specification it is in regards to a single pane of glass. The applicant has not shown and the examiner can not find support for the glazing panel comprising multiple panes of glass wherein at least one of the panes of glass of the laminate are toughened.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 4-10, 20 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites that the element exists on a surface of the pane of glass "which does not face another pane of glass of the glazing panel". It is not clear if claim 1 has more than one pane of glass since the recitation "does not face another pane of glass" does not clearly and positively recite whether or not more than one pane of glass is included in the glazing panel.

Claim 6 states the pane of glass is toughened. If claim 1 were to be construed to have multiple panes of glass, it is unclear which pane of glass of the multilayer laminate is toughened.

Claims 4, 5, 7-10, 20, and 22 are rejected for being dependent upon a base rejected claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-10, 20, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karla (US 4,618,088) in view of Marriott (US 4,119,425) further in view of Castle et al. (EP 1110431) as evidenced by Sarkhel et al. (US 2001/0002982).

Regarding claims 1, 20, and 22, Karla et al. teach a vehicular glazing panel comprising a pane of glass, 1, having opposing surfaces (Figure 1 and 2, col. 2, lines 44-47). An obscuration band, 5, is formed on the surface of the glass facing the inside cabin of the vehicle (col. 2, lines 65-67), upon which is deposited a first conductor, 3, comprising a printed layer of fired ink (abstract and col. 3, lines 1 and 55-60). A current connecting element, 14, is provided thereon (col. 3, lines 47-59 and Figure 2), which reads on the claimed second electrically conductive component. Karla teaches that the first and second conductive components are connected to each other through a molten solder (col. 4, lines 10-24).

Karla is silent to the element existing on a surface of the pane of glass which does not face another pane of glass of the glazing panel. Marriott teaches in the same art as Karla, a rear windshield, comprising on the inside cabin surface first electrical components, such as heating elements, connected to bus bars (first electrically

conductive component) which are in turn connected to suitable terminals (second electrically conductive component) (Marriot, col. 2, lines 46-col. 3, lines 41). Marriott et al. teach that their invention can utilize single sheets of glass, as well as multiple layered sheets of glass such as conventional laminated windows (col. 2, lines 59-66), wherein the components are formed on the inside surface of the window (col. 3, lines 37-41).

It would have been obvious to utilize multiple layered sheets of glass such as conventional laminated windshields, as the windshield taught by Karla, as these are known alternatives to single panes of glass in the art of vehicular rear windshields.

Karla is silent to the solder material for connecting the first and second conductive components. However it would have been obvious to use any known solder in the art. Castle et al. teach as seen in Figure 2, a windshield comprising multiple layers of glass sheets, 21 and 22, a busbar, 6, is connected to heating wires through the use of a low melting solder, 26 ([0021] and [0023]). Castle et al. teach that by using a low melting point solder, connections between two electrically conductive components can be made during the autoclave process of forming the windshield ([0003], [0021] and [0029]).

The low melting solder is taught to be tin/bismuth eutectic with a melting point of 138°C ([0003] and [[0021]]. Castle is silent to the composition of the Tin/bismuth eutectic solder, however, tin/bismuth eutectic solder is a lead free solder known in the art to comprise tin in amounts of less than 50% and a mechanical stress modifier

comprising bismuth. Sarkhel et al. evidences that the eutectic Bismuth/Tin solder is 58-Bi/42-Sn, which has a melting point of 138°C (Sarkhel, [0040]).

It would have been obvious to use this low melting point solder taught by Castle, to connect the components of Karla, as this solder is a known solder in the art of connecting conductive components on glass panes of windshields. Furthermore, Castle teaches that these solders can melt and flow during the autoclave process, i.e. soldering occurs during the process steps of forming the windshield, thereby eliminating a step of soldering.

The solder comprises Bismuth which is a mechanical stress modifier and reads on the claims as presented. Although Castle et al. do not refer to bismuth as a mechanical stress modifier, these solders share compositions similar to those instantly claimed, and therefore are expected to behave in similar manners to those instantly claimed (i.e. which inhibits the occurrence of a stress fault (i.e. crack) in the pane of glass in the region of the solder). It has been held that where the claimed and prior art products are identical or substantially identical in structure or are produced by identical or a substantially identical processes, a *prima facie* case of either anticipation or obviousness will be considered to have been established over functional limitations that stem from the claimed structure. *In re Best*, 195 USPQ 430, 433 (CCPA 1977), *In re Spada*, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). The *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily posses the characteristics of the claimed products. *In re Best*, 195 USPQ 430, 433 (CCPA 1977).

Since Castle et al. teach the same solder composition as instantly claimed, i.e. a solder with less than 50 wt% Tin and that the solder also comprises bismuth, it is inherent that the solder, when used in the windshield of Karla and Marriott, will behave in the same manner as instantly claimed, i.e. it will inhibit the occurrence of a stress fault in the pane of glass in the region of the solder.

Regarding claim 4, since the vehicular glazing panel of Karla, Marriott and Castle et al. has the same structure and the same materials as the instantly claimed vehicular glazing panel, it is inherent that it will exhibit the same fall in the stress generated in the pane of glass after an initial rise, described as a function of time, as instantly claimed (see *in re best case law applied above*).

Regarding claim 5, Karla et al. teach that around its periphery is provided a fired ink band (masking band) upon which is deposited the first electrically conductive component, 3 (Figure 2, col. 3, lines 3-20).

Regarding claim 6, Karla is silent to toughened glass laminates. However Marriott teaches that the glass panels can be heat treated (toughened) in order to prevent the formation of permanent stresses in the glass and obviate the tendency of the glass to crack (col. 6, lines 60-66). It would have been obvious to toughen the vehicular glazing panel of Karla in order to prevent cracks, and to toughen the glazing panel, as is known in the art. The vehicular glazing panel of Karla, Marriott and Castle et al. has the same structure and the same materials as the instantly claimed vehicular glazing panel, therefore it is inherent that the stress fault will manifest itself as blisters in

the fired ink band and in the corresponding regions of glass (see *in re best case law applied above*).

Regarding claims 7, the vehicular glazing panel of Karla, Marriott and Castle et al. has the same structure and the same materials as the instantly claimed vehicular glazing panel, therefore it is inherent that the stress fault will manifest itself as blisters in the fired ink band and in the corresponding regions of glass (see *in re best case law applied above*).

Regarding claim 8, the vehicular glazing panel of Karla, Marriott and Castle et al. has the same structure and the same materials as the instantly claimed vehicular glazing panel, therefore it is inherent that the stress fault manifests itself as a structural defect in the interface between the solder and the first electrically conductive component. See *In re Best* as applied above.

Regarding claim 9, Karla teach that the first electrically conductive component, 3, is a busbar (see figures 1 and 2) connecting heating elements, 2, and further teaches that the second electrically conductive component, 14, is an electrical connector (col. 4, lines 15-17).

Regarding claim 10, Karla teaches that the first conductive components is an antenna element as opposed to busbars connecting heating strips and that the second conductive component would then be an antenna connector (col. 4, lines 25-40).

Response to Arguments

Applicant's arguments with respect to claims 1, 4-10, 20 and 22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN C. LANGMAN whose telephone number is (571)272-4811. The examiner can normally be reached on Mon-Thurs 8:00 am - 6:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCL

/Jennifer C. McNeil/
Supervisory Patent Examiner, Art Unit 1784